REMARKS

Upon entry of the forgoing amendments, 1-12 and 14-21 are pending in this application with claims 1, 11, 20, and 21 being independent claims. No claim is allowed.

Claim 11 has been amended to further particularly point out and distinctly claim subject matter regarded as the invention. Support for these changes may be found in the specification in FIG. 8 and paragraph 0035, among others.

Claim 13 has been newly canceled, without prejudice.

Objection to Specification

The specification stands objected to for alleged informalities between paragraph 0036 and FIG. 9. However, the specification and figure appear to be in agreement. Paragraph 0036, line 3 calls out "a reset on even test clock (RET) flip-flop 108" and FIG. 9 shows a flip-flop 108 having as one input an *even TCK* signal. Likewise, paragraph 0036, lines 3-4 call out "a set on odd test clock (SOT) flip-flop 110" and FIG. 9 shows a flip-flop 110 having as one input an *odd TCK* signal. If upon review, the Examiner still finds there to be informalities, then the Applicant respectfully requests that example amendments be suggested.

The 35 U.S.C. § 112 Rejection

Claim 11 stands rejected under 35 U.S.C. § 112, first paragraph, as allegedly being of undue breadth for containing only a single means element in the body of the claim. However, with this paper claim 11 has been amended to include "an integrator" element from claim 13 thus rendering the rejection moot.

With this amendment, it is respectfully asserted that the claims satisfy the statutory requirements and are in condition for allowance.

The 35 U.S.C. § 102 Rejection

According to M.P.E.P. § 2131, "[a] claim is anticipated [under 35 U.S.C. §102(a), (b), and (e)] only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." It goes on to state that "[t]he elements must be arranged as required by the claim..."

Claims 1, 20, and 21 stand rejected under 35 U.S.C. § 102(e) as being allegedly anticipated by *Lai et al.* (US 6,763,486 B2). This rejection is respectfully traversed.

Each and every element as set forth in the present claims are not found in *Lai*. Furthermore, the various combinations of elements proposed by the Office Action are never arranged by *Lai* in the same manner as proposed by the Office Action or as required by the present claims.

Specifically, the Office Action states that on column 6, lines 13-25, with respect to FIG. 10, *Lai* discloses "an input test buffer having null detection capability." However, any null detection capability disclosed by *Lai* is different, incomplete, or both.

Recall from paragraph 0020 of the specification that

> The issue with the input buffer revolves around a condition known as fault masking. Generally, input buffers are designed only to output either a logic one or a logic zero. Under conditions of uncertainty, the buffer may output either a logic one or a logic zero by default. If so, the true logic state is unknown and masked by what appears to be a definitive output. The reason for the uncertainty can be based on any one of a number of faults. The uncertainty is an analog signal level where the buffer neither recognizes it as a logic one nor a logic zero. This is known as a null condition. In the case of differential signal lines, there are more possible cases of null conditions due to non-complementing signal conditions where the differential signal pair fails to develop a threshold voltage difference between the two lines.

Recall further that the specification outlines five fault syndromes that can occur in differential signal lines in paragraph 0025 with respect to FIG. 3. The emphasis being on differential null conditions as opposed to individual null conditions. The two are not necessarily the same. Correspondingly, the independent claims have been amended to explicitly include this facet of the invention which was implicit before, that is, "an input test buffer having *differential* null detection capability" or "detecting a *differential* null condition" as claimed. By contrast, *Lai* discloses that the frequency-based embodiment of FIG. 10 uses "single-ended receiving" (Col. 6, line 15) rather than differential null detection. This is not as claimed. Thus, *Lai* can not be said to anticipate the claimed invention.

The 35 U.S.C. § 103 Rejection

According to M.P.E.P. § 2143,

> To establish a *prima facie* case of obviousness, three basic criteria must be met. First there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in the applicant's disclosure.

Claims 2-6, 8, 11-15, and 17 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over *Lai* in view of *Kim et al.* (IEEE 2001). Claims 7 and 16 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over *Lai* in view of *Kim* and further in view of *Ichie* (US 5,050,187). Claims 9, 10, 18, and 19 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over *Lai* in view of *Kim* and further in view of *Koenemann et al.* (US 5,617,426). These rejections are respectfully traversed.

Generally, the Office Action states that *Lai* discloses or suggests most of the claim elements and limitations and that one or two of the other prior art references disclose or suggest the rest. However, the arguments presented above with respect to *Lai* apply equally here and are not rebutted by the additional references individually or in combination.

In view of the above, it is respectfully asserted that the claims are now in condition for allowance.

Request for Allowance

In view of the foregoing, reconsideration and an early allowance of this application are earnestly solicited.

If any matters remain which could be resolved in a telephone interview between the Examiner and the undersigned, the Examiner is invited to call the undersigned to expedite resolution of any such matters. Please charge any additional required fee or credit any overpayment not otherwise paid or credited to our deposit account No. 50-1698.

Respectfully submitted,
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